

Title Storage life extension of exported 'Nam Dokmai' mango by refrigerated modified atmosphere packing

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Citation Abstracts, 10th International Controlled & Modified Atmosphere Research Conference, 4-7 April 2009, Antalya, Turkey. 80 pages.

Keyword mango; export; perforated holes

Abstract

Storage life extension methods are important for sea transportation of exported Thai mangoes. This research was conducted to find out the suitable atmosphere in mango package during cold storage. Mango fruit was packed in seal polyethylene terephthalate plastic box with 7 level of perforated holes (0, 0.5, 1.0, 1.5, 2.0, 2.5 and 3.0 cm²/m²) for modified atmosphere in package at different conditions. The fruit were kept at 5°C for 25, 32 and 39 days and transferred to room temperature (25±5°C). Result showed that, mango fruit packed in package with perforated holes 1.5 and 2.0 cm²/m² and kept at 5 °C for 32 days showed normal fruit without chilling injury symptom and normal ripening after removal to room temperature for 7 days. Mango fruit packed in seal package without hole or with few holes showed fermented symptoms. Fruit packed in seal package with too many holes showed chilling injury symptoms. The suitable package for mango e.g. condition of atmosphere in the package at equilibrium, perforated holes size, fruit size, free space of atmosphere in package, and design of package will be presented and discussed.